

E5.F17 Summarized Existing Fisheries Information

Table 1 MIS, ESA-listed, and Sensitive Species Considered

Species	Special Status*	Considered in this Analysis	Rationale
Westslope cutthroat trout <i>Oncorhynchus clarki lewisi</i>	S	Yes	Present in the project/analysis area and in other portions of the larger surrounding subbasins in Idaho (IDEQ 2005).
Snake River steelhead trout <i>Oncorhynchus mykiss gairdneri</i>	MIS, T	Yes	Native to and present in the project/analysis area. ESA listed as threatened and Pete King Creek and several of its tributaries are mapped as designated critical habitat
Redband trout <i>Oncorhynchus mykiss gairdneri</i>	S	No	There are no known rainbow trout populations that are segregated from steelhead trout in the project area. There would be no effects to this species since they do not occur in the area.
Snake River spring/summer chinook salmon <i>Oncorhynchus tshawytscha</i>	S	Yes	Hatchery form of Spring chinook salmon occur within the project area streams.
Snake River fall chinook salmon <i>Oncorhynchus tshawytscha</i>	T	No	Fall chinook do not occur in or near the project area but do occur downstream in the mainstem Clearwater River. Designated critical habitat is over 30 miles downstream from the project area. There would be no impacts to fall chinook as a result of the project (Not further discussed in this analysis).
Bull trout <i>Salvelinus confluentus</i>	T	No	Not found in or near the project area (not further discussed in this analysis). Pete King Creek has no Designated Critical Habitat (PF)

## E5.F17 Summarized Existing Fisheries Information

Table 1 MIS, ESA-listed, and Sensitive Species Considered

Species	Special Status*	Considered in this Analysis	Rationale
Pacific lamprey <i>Lampetra tridentata</i>	S	No	Pacific lamprey are not known to occur in the project area. Lamprey may occur upstream in the mainstem Lochsa River although densities would be very low. There would be no impacts to Pacific lamprey as a result of the project since there is no habitat and it would not produce measurable sediment to streams or increase stream temperatures (not further discussed in this analysis).
Western pearlshell mussel <i>Margaritifer falcate</i>	S	No	No known population within the project area (not further discussed in this analysis).

\*MIS = Management Indicator Species; S = R1 Sensitive Species; T = ESA "Threatened" species

### Pete King Sub-watershed Fish Species

There are approximately 20 miles of main-stem and tributary fish-bearing streams within the Pete King Creek watershed validated by extensive surveys (E5.F20 and 21). The smaller perennial fish bearing tributaries within the Pete King watershed are Nut Creek, Walde Creek, Placer Creek, Polar Creek and the West Fork of Pete King Creek. These areas occur in the main-stem and lower reaches of the tributaries where stream gradients are relatively low (<6%) and suitable habitat for fish spawning and rearing is present (Map 1, table 1, E5.F17, 20, 21). Fish sampling surveys and habitat information was used to determine where the extent of presence and of habitat available for the three key native fish species found in the watershed (Table 1). Within the Pete King watershed there is approximately 20 miles of westslope cutthroat habitat, 9 miles of steelhead/rainbow trout habitat and 4 miles of Chinook salmon habitat. Salmonids observed during a 1991, 1997 surveys of Pete King Creek (E5.F21) were steelhead/rainbow trout, westslope trout, and Chinook salmon. No bull trout have been observed or recorded in the watershed (E5.F20 and F21). Other fish sampling done by the State of Idaho (IDEQ) confirms these conclusions for species present/absent within the system (E5.F23). ESA designated critical fish habitat mapping also corresponds to these conclusions (E5.F20). There several more miles of perennial and/or intermittent streams and stream reaches within the Pete King sub-watershed that do

not contain fish due to natural barriers, low flows, small size, high gradients and/or a general lack of habitat. The status of all native species historically found near the project area is described in table 1.

### **Westslope cutthroat trout (WCT)**

Westslope cutthroat trout (WCT) is considered a ***Region 1 sensitive species*** and are native to Snake River tributaries in Idaho (including the Clearwater and Lochsa river basins) (Behnke 1992) and are often the most abundant (or only) native salmonid inhabitants of the low-order streams in these drainages. The species naturally coexists with anadromous rainbow trout in many Idaho streams with varying degrees of hybridization (Weigel et al. 2003). Cutthroat presence was mapped based on sampling information for the project area (E5.F20, F21 and F23) and appear to be prevalent throughout the Pete King drainage.

Cutthroat trout require cold water and relatively low levels of fine sediment to breed and survive (McIntyre and Rieman 1995), so the presence of individuals of the species, especially juveniles, indicates relatively high water quality. 2019 stream channel/habitat assessment (E5.F16) indicated that Pete Creek and its tributaries mapped as containing cutthroat trout were functioning properly and showed stable stream banks and good overall habitat quality for rearing and spawning.

### **Snake River steelhead - ESA Listed, Designated Critical Habitat, Forest Plan MIS**

MIS for the project area is steelhead/rainbow trout, based on the Forest Plan, and was also analyzed as an ***ESA-listed species (E5.F17 and Table 1)***. Rule document issued on August 18, 1997 in the Federal Register issued a final determination that Snake River steelhead (*Oncorhynchus mykiss*) are ESU's or "species" that are listed as Threatened (also see BA). ***Designated Critical habitat*** has also been mapped and identified for Snake River steelhead within Pete King Creek and several of its tributaries (E5.F15 and 20). Steelhead are also considered to be a NPCW Forest Plan Management Indicator Species (MIS) (Table 1).

Snake River Basin steelhead are summer steelhead, as are most inland steelhead, and comprise 2 groups, A- and B-run, based on migration timing, ocean-age, and adult size. Snake River Basin steelhead enter fresh water from June to October and spawn during the following spring from March to May. B-run fish, which occur in the Clearwater River Basin, enter fresh water from late August to October, passing Bonneville Dam after 25 August. B-run steelhead are thought to be age 2 ocean fish. They are 75 to 100 mm larger than A-run steelhead of the same age due to their longer residency in the ocean. Unlike other Pacific salmon, steelhead are iteroparous, meaning that they are capable of spawning more than once before they die. However, most steelhead in the Clearwater Basin survive to spawn only once.

Spawning and initial rearing of juvenile steelhead generally take place in moderate gradient (generally 3-5%) streams. Females dig redds and deposit 1,500 to 6,000 eggs in pea to baseball size gravel. The eggs hatch in about 35-50 days, dependent upon water temperature. The alevins remain in the gravel 2 to 3

weeks until the yolk sac is absorbed and then emerge as fry in late spring and begin to actively feed. Egg to fry survival is usually near 15%. Snake River Basin steelhead usually smolt as 2 or 3 year olds.

Productive steelhead habitat is characterized by complexity, primarily in the form of large and small wood and/or boulders and rock. Juveniles will take advantage of microhabitats to seek refuge from high water velocity and/or temperatures. Juveniles may move around in a basin to take advantage of favorable habitat. Fry prefer protected and complex edge habitat with low velocity (<0.3 ft/s). They are seldom observed in water over 15 inches deep. Summer rearing takes place primarily in the faster parts of small and deep scour pools with some form of surface cover and wood or medium to large substrate (cobble or boulders). Other important habitat components for juveniles are pools with "bubble curtains", undercut/scoured areas, pocket water in deep riffles and rapids. Winter rearing occurs more uniformly at lower densities across a wide range of fast and slow habitat types. Small tributaries and lakes are probably important winter habitat. As juveniles get older, some tend to move downstream to rear in larger tributaries and main-stem rivers.

Wild, indigenous steelhead, unaltered by hatchery stocks, are rare and may only be present in about 25 percent of the current steelhead trout distribution. Within the Central Idaho Mountains, recent steelhead trout runs are described as critically low. Key factors to the decline of steelhead trout in the Pacific Northwest include predation and competition from introduced fish, blocked access to historical habitat, passage mortality at major dams, habitat degradation, hatchery interactions, and harvest.

Populations of steelhead/rainbow trout require relatively cold water and low levels of fine sediment to breed and survive, so the presence of individuals of the species, especially juveniles, indicates relatively high water quality. The abundance of wild anadromous steelhead in the project area is also highly affected by migratory conditions in the Snake and Columbia Rivers, and by forage abundance and other rearing conditions in the Pacific Ocean.

### **Spring/Summer Chinook Salmon (CH)**

Spring/Summer Chinook Salmon are native to the Clearwater and Salmon River basins, but extirpated from the basin in the 20th Century and re-introduced with non-native (i.e., not ESA-protected) stocks. ESA-listed individuals migrate through and rear in the Snake River main-stem, which is Critical Habitat (79 FR 75449), but no CH is present in the Clearwater River basin. Today, a hatchery form of spring chinook are found in the project area and are considered a Region 1 sensitive species